

REMARKS

The present amendment is in response to the Office Action mailed December 15, 2004. Applicant appreciates the indication of allowable subject matter in claims 7, 8, 10, 11, 15, 16, 19, and 20.

Prior to entry of this amendment, claims 1-20 are pending. By this amendment, the title and claim 7 are amended, and new claims 21-24 are added. No new matter is added.

Claims 1-24 are presented for prosecution.

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and following remarks.

Objections to the Specification and Drawings

In the outstanding Office Action, the title was objected to. The title has been amended responsive to this objection. Withdrawal of the objection is requested.

Also in the outstanding Office Action, the drawings were objected to for allegedly using all of reference numerals "10", "11" and "12" to designate the "unit cells" i.e., photoelectric conversion elements, in Fig. 1A. Applicant respectfully traverses the objection to the drawings for the reasons set forth below.

Page 11, lines 22-24 of the specification indicate that reference numeral "10" is used to designate individual photoelectric conversion elements, reference numeral "11" is used to designate photoelectric conversion element rows and reference numeral "12" is used to designate photoelectric conversion element columns. Therefore, reference numerals 10, 11 and 12 are used to designate three distinct elements shown in Fig. 1A.

Accordingly, Applicant respectfully submits that Fig. 1A is in compliance with U.S. patent practice, and withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C. § 112

Claims 3, 6, 9 and 12 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action asserts that there is no charge accumulated in the photoelectric conversion elements after the electronic shutter operation of claim 1, and that therefore, there is no utility in performing the image signal read operation of claims 3, 6, 9, and 12, after the electronic shutter operation (of claim 1). Applicant respectfully traverses this rejection, as follows.

Claim 1, from which claims 3, 6, 9, and 12 depend, recites, in part:

an electronic shutter operation of sequentially supplying said reset signal from the reset row-shifter to said reset signal lines corresponding to at least said rows to be subjected to said image signal read operation for sequentially draining said charges accumulated in the photoelectric conversion elements...

Claims 3, 6, 9 and 12 recite, in part:

said correcting still image mode controller makes said MOS type solid-state image pickup device perform the image signal read operation following said electronic shutter operation...

It is respectfully submitted that the language "following said electronic shutter operation" does not limit the image signal read operation to being performed immediately following the electronic shutter operation, as would be necessary for there

to be no charge accumulated in the photoelectric conversion elements thereafter, as asserted in the outstanding Office Action.

Thus, it is respectfully submitted that claims 3, 6, 9, and 12 are in compliance with U.S. patent practice. Withdrawal of the rejection, and allowance of claims 3, 6, 9, and 12 are respectfully requested.

Claims 1, 2, 4, 5, 13, and 14 Recite Patentable Subject Matter

Claims 1, 2, 4, 5, 13, and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Juen (US 6,542,194) in view of Yamagishi (US 6,710,808). Applicant hereby traverses the rejection, as follows.

In making this rejection, the Office Action asserts that Juen teaches all of the features of independent claim 1, with the exception of a flashing device for emitting a flash in response to a reception of a predetermined signal flash...wherein a flashing device operation signal for operating said flashing device is made in the state that said readout row-shifter and said reset row-shifter are not operated.

The Office Action asserts that Yamagishi discloses this missing teaching, specifically at Figs. 7 and 8, and that it would have been obvious to modify Juen to include this teaching of Yamagishi in order to allow an object to be more fully illuminated.

Applicant respectfully submits that there is no motivation to combine the teachings of the Juen and Yamagishi references, and that any rejection based thereon is improper.

Juen is directed to a MOS image sensor in which a reset scanning operation is used to perform still image shooting. In the MOS image sensor of Juen, each photodiode PD is connected through a select transistor QT to a gate of an output transistor QA. The output transistors of the same column are commonly connected to an output line LV. A reset transistor QRST is coupled to the transfer transistor QT to drain the stored charge. Since the output line LV has no storage function, a read operation is performed line (or pixel row) by line (or pixel row). For sequential imaging, a reset operation is also performed line by line. In addition, a shutter operation of Juen is performed line by line, as shown in Fig. 1.

During still image shooting, Juen discloses performing a reset and read operation for each line (pixel row) at the same speed as the shutter travel speed, so that the exposure time for each pixel is the same. The rows are reset, exposed, and read sequentially. Therefore, as shown in Figs. 1 and 2A, once the reset scanning begins during still image shooting in Juen, the entire array is not simultaneously exposed. Emitting the flash of Yamagishi after resetting and before reading the pixels during still image shooting in Juen (i.e., at any time during still image shooting in Juen) cannot occur at a period when the readout row-shifter and reset row-shifter are not operated.

Furthermore, Yamagishi is directed to a flash operation for a charge coupled device (CCD) image sensor, in which a vertical CCD, which inherently has a storage function, is provided for each column of photodiodes. As previously explained, Juen is directed to a MOS image sensor, in which a reset scanning operation is used to perform still image shooting. Thus, there is no motivation to combine the flash of Yamagishi with the still image shooting operation of Juen.

Moreover, since Juen teaches to perform the reset/read and shutter operations simultaneously (as shown in Fig. 2A), so that the exposure time for each pixel is the same, modifying the still image shooting operation of Juen to include the flash operation of Yamagishi would render the still image shooting operation of Juen unfit for its intended purposes.

Section 2143.01 of the MPEP states:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

Section 2143.01 of the MPEP further states:

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further still, in In re Ratti, a combination of references was not held to be prior art because:

the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

For at least these reasons, Applicant respectfully submits that there is no motivation to combine the teachings of Juen and Yamagishi. Applicant further submits that the rejection of claims 1, 2, 4, 5, 13, and 14, which is based on the combination of Juen and Yamagishi, is therefore improper.

For all of the above reasons, withdrawal of the rejection of claims 1, 2, 4, 5, 13, and 14 under 35 U.S.C. § 103(a) is respectfully requested.

Claims 7, 8, 10, 11, 15, 16, 19 and 20 Recite Patentable Subject Matter

Claims 7, 8, 10, 11, 15, 16, 19 and 20 were objected to as depending from a rejected base claim. Claim 7 has been amended to be in independent form including all of the limitations of the base claim and any intervening claims. Thus, claim 7 and claims 8, 10, 11, 15, 16, 19 and 20, which depend therefrom, are in condition for allowance and a notice to such effect is respectfully requested.

New Claims 21-24

New claims 21-24 depend from claims 3, 6, 9, and 12, respectively. As such, claims 21-24 are allowable for the same reasons as claims 3, 6, 9, and 12, as well as for the additional subject matter recited therein. Accordingly, allowance of claims 21-24 is respectfully solicited.

CONCLUSION


In view of the above amendments and remarks, Applicant respectfully submits that all pending claims are in condition for allowance, and favorable reconsideration of the application is respectfully requested.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is invited to contact the undersigned representative at the telephone number listed below.

In the event this paper has not been timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107317-00028**

Respectfully submitted,

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